The Stuff that Dreams are made of. See page 343.
Injurious Influences of City Life. See page 342.

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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

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EDITED BY

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CONTENTS OF No. 282.

	PAGE
Notes by the Way: By the Editor.	337
Original Essays:—	
Dust from a Health Point of View. By A. J. Daniels	338
Meagre Fare. By Dr. W. Curran. Second Paper	339
Personal Health:—	
Rickety Children	341
Injurious Influences of City Life. By Walter B. Platt, M.D., F.R.C.S.	342
The Family Circle:—	
The Stuff that Dreams are made of. By Meredith Clymer. First Paper.....	343
Popular Science Papers:—	
Vegetable Rennet (concluded) ..	345
Public Health:—	
The Conditions of Health. By Professor J. Simpson	346
Jottings from the Journals:—	
The Cotton-String Cure—How Chicory is Prepared, &c.—Ingrowing Toe-Nail.....	348
Sanitary Appliances, &c.:—	
Brand's Beef Bouillon—Milk in Powder—How to make Botanic Beer	349
Our Letter Box:—	
Rules for Correspondents	350
Letter to the Editor—Cigarette Smoking	350
Queries and Answers:—Replies, &c.	350

Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

A MEETING was lately held in Glasgow by persons favourable to the formation of a Scottish Burial Reform and Cremation Society. Dr. Cameron, M.P., occupied the chair. Resolutions were passed disapproving of the existing methods of burial, and expressing a desire for the substitution of less expensive and more healthy methods of disposing of the dead, approving in particular of cremation. A society was subsequently formed, under the title of the Scottish Burial Reform and Cremation Society.

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THE Duke of Argyll, who has of late been posing as an authority on all manner of subjects, scientific, political, and social, has been good enough to say that in his opinion cremation is not "unchristian." What, in the name of common-sense, may one ask, has theology of any kind to do with cremation? We do not consult theology regarding the food we should eat, or the clothes we should wear, or the manner in which we should drain or ventilate our houses. Why, then, bring theology into the cremation question? Ordinary burial is a failure, and a danger to the living; therefore, let us adopt a system which is cleanly, healthy, and which will save the waste of valuable ground at present given over to cemeteries. Some people are never content unless an opinion or movement is "nail'd wi' Scripture."

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ALLIED to cremation is the subject of "Burial Reform." A correspondent of a contemporary says that among the desired reforms mentioned are: "That the coffin should be of the most perishable and lightest material," and "burial in the plain earth, in conformity with the instructions in the Burial Service—'earth to earth.'" But would not even "compressed pulp" as the material of the coffin in dry earth tend to postpone decomposition? and cannot the coffin be completely got rid of, in order that the earth may have full play, and at once, on the body? Are there any valid objections in this country to envelopment of the body in merely some light sheeting, and so interred (simple and primitive), with an additional temporary covering of cloth during transit to the cemetery? Or, if the process of conveyance and religious ceremonies in church require some firmness in the material to conceal from view the outline of the body, could not a wooden coffin be made of separable parts to further these aims, but to be removed after deposition in the grave?

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SUPPOSE that the bottom of the coffin (of wood, or any other temporary firm material), a plank with outline as at present, had, at about an inch or less from the edge, a thin wooden ridge about three inches high running all round (to keep the upper part *in situ* and prevent escape of fluid from the body), and so forming one part, and the top and sides to form the other, the latter, when connected with the former, enclosing the ridge and resting on the bottom with a few light iron clamps to retain the two portions firmly together in transit. The body, in some light covering, could be lowered in this into the grave, and after completion of the ceremonies, the upper part (clamps loosened previously) could be drawn up, leaving the body resting on the bottom of the coffin, but free elsewhere for direct contact with the earth. This would deviate but little outwardly from our present system up to deposition in the grave; but beyond this it would thoroughly (the back of the corpse excepted) effect "earth to earth."

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IT would not necessarily entail very early burial; and though an objection might be raised by the friends to

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the ground falling roughly on the all but exposed body (hardly more unpleasant than the rattle on the hollow coffin), yet a little care in the deposition of the first earth would obviate this natural grievance. The cost would be small, as the upper part of the coffin would be available for any number of burials, while sanitation and transit purposes would be met. The riddance of any kind of coffin seems eminently desirable. What is to be said against the suggestion?

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I would reply that the ideas of the writer are, in the main, sensible. If burial is to be adopted, let it be true "burial" by all means. But in the case of the bodies of persons who have died of infectious diseases, such burial as the writer advocates would simply tend more thoroughly to pollute the earth with germs, which are not destroyed by burial in the earth. In short, the argument for cremation as the only safe and satisfactory mode of disposing of the dead, in relation to the living, equally controverts the idea of even "burial reform" as dangerous. With cremation, there is neither pollution of earth, air, or water, and no question of coffins, or of lavish and sinful expenditure of money on funerals need be entertained.

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In spite of much careful instruction in the meaning and treatment of infection, says a medical journal, there are still many to whom the mention of its dangers and its duties apparently conveys but little sense of responsibility. Among ignorant members of the working class one finds a prevalent unconcern, which is perhaps hardly to be wondered at. Among the more intelligent section of the population something of a truer insight might be looked for; but even here the careless or wilful callousness occasionally displayed in regard to this matter is remarkable. In an instance lately reported to have occurred at a northern watering place, the circumstances, as stated, display an unusual dulness of perception in this particular.

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A lady is said to have requested the use of a separate bathing-machine for two of her children, on the plea that they were suffering from scarlet fever and must not be allowed to bathe with two others who were free from it. In other words, the safety of her own family was a consideration to be remembered, but that of others who might afterwards use the infected machine was of no consequence. The machine-keeper very properly declined to grant this absurd and selfish application.

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We have the doubtful satisfaction of learning more than one lesson from this incident. In the first place, it is evident that the care of those who own and let vehicles, whether for bathing or other purposes, is in vain unless the public generally will assist them in protecting its health from wanton or careless injury. Further, we learn, and not for the first time, that children convalescent from infectious illness are sent to the country to recruit while still capable of communicating the disease. Thirdly, it is evident from the above narrative that the children may be heedlessly subjected to a danger as real as, if not more so than, that of the original illness—the risk of nephritis (or kidney-inflammation) from exposure of the peeling skin surface to cold. We would fain hope that the facts of this case as reported are capable of some other explanation than the above.

Original Essays

"Life is not to live, but to be well."—*Martial.*

DUST FROM A HEALTH POINT OF VIEW.

By A. J. Daniels.

Carlyle once gave it as his opinion that hunger and the policeman are the two prime factors that keep the world moving and prevent humanity sinking into a state of stagnation. To these the sage of Chelsea might appropriately enough have added a third—*dust*. There can be little doubt that the perpetual and universal striving after that state of human affairs that is proverbially believed to be next to godliness in importance, has much to do with keeping the inhabitants of the globe in a state of healthy activity.

The sweeping and garnishing of the domestic dwelling is, indeed, an operation which, so to speak, never has an end. The minute particles of organic matter—including very possibly, among other things, the desiccated remains of Imperial Cæsar and other equally distinguished worthies—with which the atmosphere is always charged, and which are invisible to the naked eye, save in a ray of sunlight or a beam from an electric candle, are continually settling. The fumes from the gas leave grimy deposits, fireplaces follow suit, and scores of other minor dirt-producing agencies combine to the same end, and add their little to the mickle which causes Mary Jane unceasing anxiety and compels Sarah Ann to pass the principal portion of her existence brandishing a broom or switching a duster.

That dust and dirt are injurious to health, and produce, in one shape or another, a vast amount of ill, are truths which need no demonstration. To prevent the admission of dust is, of course, an utter impossibility, but it is within human power to prevent it accumulating and increasing.

The ordinary solution of the difficulty seems to lie in the frequent and vigorous use of the domestic besom; but in this, as in most things, there is a right and a wrong way of pursuing operations. It is true that an indiscriminate onslaught on the offending particles disperses them, but where do they go? The answer is very simple. The molecules which have emanated from all sorts of places, many of them unsavoury and insanitary, rise in the air, and, while some fly to the lungs and distribute themselves over the persons and clothing of those who are present, others find a resting-place in crevices and on every projecting point that offers a convenient lodgement. It is, therefore, clearly evident that the labour and exertion employed in removing the dust have merely resulted in disturbing the particles and shifting them from one place to another. The operation being repeated again and again on the same lines, the dust for the most part is never really got rid of, but only disturbed.

It is quite common to hear the exclamation, "How does everything get so dusty?" And at first sight it seems rather surprising that dust should collect as it does in all sorts of inaccessible and out of the way places. But when one reflects that the air is kept permanently charged with microscopical particles by both natural and artificial means, and that the air permeates everywhere, the explanation is clear. Those who are loudest in their complaints are often the very ones who are most responsible for adding to the already overcharged atmosphere by producing artificial dust in unlimited quantities. They sweep their rooms, brush their clothes, and shake their

mats, and then seem astonished that their houses are dusty!

It is, indeed, almost impossible to perform the simplest action without raising "a certain portion of uncertain dust," to paraphrase Byron. In walking when the weather is dry, the feet crush the earth and transform it into dust, and when the ground is wet the damp earth clings to boots and clothing, and is conveyed indoors, to be subsequently removed in the form of dust.

The remark of the American wit, that every step one takes in life tends to reduce the size of the globe, has, therefore, in this connection a certain amount of truth in it. Now, when we reflect that such dust consists of a variety of components, the bad unquestionably preponderating, it is certainly contrary to all hygienic principles that the garments one wears should be brushed indoors, or that carpets should be shaken or otherwise cleaned near where people live. Yet it is a common sight to see carpets beaten in back yards and gardens. Dirty mats and carpets, no doubt, foster and create a considerable amount of unhealthiness and illness, for under the changing atmosphere of the house, heat and damp, germs, which have been deposited in the form of dust, assume all kinds of ugly forms.

Dust too often means a good deal more than its name implies, and those who neglect its removal lay themselves open to a variety of ills of which they are not cognizant. Where there is much traffic, carpets should certainly be removed and cleansed as frequently as convenient, not only for health's sake, but for the preservation of the fabrics themselves. The gritty particles lodge in the crevices and are trodden in, destroying the threads and ruining pattern and colours. It is folly to imagine that a carpet can be properly cleansed by assaulting it for ten minutes daily with a stiff broom, which only reaches the surface, whereas the dust soon works itself through and lies underneath on the surface of the flooring. For removing surface dust, ordinary tea-leaves or damp saw-dust are efficacious, for they prevent the dust rising in clouds. Still, to be properly and thoroughly cleansed, carpets, mats, curtains, and other dust-absorbing fabrics require to be beaten, as well as brushed, in the open air.

Curtain-poles, cornices, picture-rods, chandeliers are famous dust-accumulators, for, owing to their inaccessible positions, "distance lends enchantment to the view," and the offending dust too often escapes attention.

Larders out of doors should be ventilated by means of a finely-perforated zinc plate, to prevent dust entering and settling on the food, and kitchen windows, when kept open in windy weather, should be similarly protected against dust clouds.

After a good tramp through country lanes or streets the face requires thoroughly cleansing, for the damp surface of the skin attracts the dust, which enters the pores and gives rise to irritation and ugly cutaneous outbreaks, unless promptly removed. The unhealthy appearance of workpeople engaged in "dusty trades," such as grinding colours, mustard, washing-blue, &c., is more often than not owing to their uncleanly habits. The dust blocks up the pores, prevents the perspirative organs acting, and the result is that the skin becomes hard, discoloured, and eruptive. The blood, too, gets affected, and through it the whole system becomes disorganized.

Children—especially when they are very young—should be carefully protected from dust. Their tender epidermis is peculiarly sensitive to the destructive influences of gritty particles, and the same may be said of their breathing organs.

Dust in the eye creates a considerable amount of irritation and discomfort, which is often increased threefold by clumsy attempts to remove it. It is a great, and often serious, mistake to rub the lid. This has the effect of working the particle in instead of out, and sometimes causes it to cut the eyeball. It is preferable, whenever possible, to hold up the lid while another person inspects the eye and removes the fragment; or, should it cause pain, at once consult a medical man. Bathing with tepid water will greatly soothe the eye after the removal of the particle.

MEAGRE FARE.

By Dr. W. Curran.

SECOND PAPER.

So much for the glowing East and its relationship to, or fitness for, the kind of fare described in our last paper. Let us now reverse the picture, and see how far a residence in the more sombre West is compatible with a similar regimen. That the East, taken as a whole, is hotter than the West, I think, is now generally admitted by geographers, but the reason of this difference, if such it be, is not very obvious, neither need we concern ourselves about it here; and I have already intimated that, though fat in the shape of ghee (*alias* clarified butter) is largely used in that quarter, it is only in the West—that is to say, in the northern portions thereof—that fat is transformed from a luxury into a necessity of life. So well known is this on the Continent that, as I am credibly informed, Swiss and other hotel-keepers provide accordingly when they are visited by Russian or other northern travellers, and the fact is so well put by "The Earl and the Doctor," in their interesting "North West Passage by Land," p. 122, that I cannot withhold their description of it from my readers.

They say that "one effect of the cold was to give us a most ravenous appetite for fat. Many a time have we eaten great lumps of hard grease—rancid tallow used for making candles—without bread or anything else to modify it. Fat, indeed, seems to be the standard by which they estimate the value of a horse or a woman. It is, in fact, the most valuable part of food in the winter, and horses and dogs will not stand work in the cold unless fat forms a considerable portion of their food." This is very likely — nay, it is well known to our explorers, and the pemican, so largely consumed on these expeditions, contains large quantities of it. But this is not quite our subject, and I merely introduce the topic to emphasize the effects of climate on appetite and digestion, and so clear the way for what follows in this connection.

"The Peruvian performs," according to Prescott and others, "his wearisome journey day after day, without fatigue or complaint, with a supply of coca in his pouch"; and his conquerors, the Spaniards, "were at one time reduced, under Pizarro, to the wretched allowance of two ears of Indian corn a day per man." Their successors under Cortez* and Orellana had to be content with even less than this, and it is said of the latter that they were once so straitened for any kind of food that they had to take to the hilts of their swords, the leather of their saddles, as well as to the weeds and vermin of the forests through which they were at the time travelling.

* There is a good account of this coca and its effects in Church's "Johnstone," as above, pp. 360-5, and as to the explorers of the Amazon under Orellana, Prince Adalbert of Prussia says ("Travels, &c.," vol. ii. p. 142), that they were obliged "to eat boiled shoes and leather straps," moreover, I have read of similar episodes in other quarters.

Very similar articles have been consumed under similar circumstances since, and especially so at or during sieges, from those of Athens, during which, as Plutarch tells us ("Life of Sylla"), that "the people eat not only the herbs and roots that grew about the citadel, but sodden leather and oil-bags," and Samaria, at which "pigeons' dung" was sold dearly as food, to those of Derry and Paris in our own days.

Mr. Washbourne, our latest authority on this latter, says that "on the sixty-sixth day of this siege the new 'quotations' were, for cats — a common cat, eight francs; a Thomas cat, ten francs; for rats— a common rat, two francs; a long-tailed rat, two francs and a half; for dogs—a cur of low degree, two francs a pound; for a fat dog, two and a half francs; and for a —— fat dog, three francs per pound," and his other experiences, trials, struggles, &c., over this kind of feeding or food-question strongly enforce the truth of Miss Biddy Fudge's philosophic and consolatory observation—

> "Indeed, Doll, I know not how it is, but in grief
> I have always found eating a wondrous relief."

As further illustrations in this direction, as well as to show that the East has not it all its own way in this particular, I may mention, on the authority of Miss Knight ("Autobiography"), that "General Elliott, to set an example to others, lived for several days on six ounces of rice per diem during the siege of Gibraltar." There is really a great deal of truth in the old saw that "man wants but little here below;" nor, indeed, does he want that same very long. It is his other belongings, surroundings, or associations that make all the difference, and a Polish Jew, a Scotch crofter, or an Irish ploughman would probably thrive on such fare as would disgust or repel the workers of other Northern nationalities.

Suffering of this kind would, indeed, appear to be the heritage of these poor toilers, and as to the latter, the late Duke of Cambridge is reported by Miss Cusack ("The Life of the Liberator," p. 749) to have said, during the Irish famine, with that fine feeling of patronage and self-sacrifice that one expects from German State paupers, that "rotten potatoes and seaweed, or even grass, properly mixed, afford a very wholesome and nutritious food." Did his Royal Highness, I wonder, ever try this? "We all know," he intimates, "that Irishmen can live upon anything, and there is plenty of grass in the fields, even if the potato-crop should fail." There is, indeed, and it is a pity his Highness had not a turn of it, if only to show its nutritional value, and prove that his royal predecessor, the Assyrian Nebuchadnezzar, was not, after all, as badly used as is represented by the Daniels and others of his day.

After telling his mother in gleeful tones that he could live very well on Indian corn and grease, Lord Edward Fitzgerald adds ("Life," by Moore, vol. i., p. 150, &c.) that "the Canadian *engagés* here live on nothing but two handfuls of corn and an ounce of grease a day, and work and sing the whole day. It is very pleasant to travel with them. They sing all day and keep time with their paddles;" and this kind of pleasantness is also, as I think, an effect of a frugal fare. I noticed it certainly in my own Cashmere coolies, who toiled and fed somewhat after this fashion, and I believe that the ferocity as well as the brutality of some of our criminal paupers is largely, if not entirely, due to the grossness of their supplies and the badness of their cookery. Be that, however, as it may, I rejoice at the efforts that are now being made in our midst to teach our wives and sisters a better and cheaper system of cookery than was hitherto open to them. I wish, also, that we could have a better system than is now always available for the cooking of our soldiers' and sailors' rations. But of that I may say something hereafter, and meanwhile the two following items will not be out of their place. Describing the Spanish garrison of Centa as it stood in his time, the Duke of Buckingham and Chandos tells us ("Private Diary," vol i., p. 52) that the rations of the troops stationed there, consisted (on the occasion of his visit) of three-quarters of a pound of biscuit and half rotten peas or beans, the refuse of Gibraltar," and the following extract is so pertinent to our general issue that I cannot withhold it from my readers.

Here it is, and it is, indeed, no wonder that the audience who heard this trial were as astonished as they were amused or bewildered by this strange recital:—"On Saturday the case of Bardsynski *v.* Lloyd was brought to a conclusion in the English Court of Queen's Bench. The suit—which has attracted some attention—was instituted by Bardsynski, a Pole, who described himself as a "Count," to recover £2,500 from Mr. Lloyd, a Welsh gentleman. The plaintiff's case was that defendant met him in London, in November, '67, and offered him £2,500 to serve for six months as a substitute in the Roman Noble Guard. On going to Rome, Bardsynski told the Count that he found he had to serve as a common private in the Pontifical Zouaves, *where he had to eat food mainly composed of flies, and to live on three halfpence a day.* In cross-examination, Bardsynski gave a most romantic account of his life and adventures. He said that he had served as an officer in the Polish insurrection of '64, that he had been in 42 battles and had been twice wounded, "once behind and once in the ankle;" that he had killed a Circassian chief in battle; that he had been four times a prisoner; that he had, when in prison at Warsaw, been fed for eleven days on a herring, getting neither water nor bread; that he killed two rats with his own hand, and sucked their blood for drink, and so on. In fact, the auditors in the Court of Queen's Bench were regaled with a story as wonderful as any relation of Trenck or Munchausen."

Equally amusing is the episode of the "Norfolk Sauce," concocted or recommended by the Duke of Norfolk in 1845. Its principal ingredient was curry powder in hot water, which was said to deaden the pangs of hunger in India and elsewhere, and the controversy or curiosity this strange ducal suggestion elicited at this time and subsequently, is so well set forth in the following extract from an evening paper, that I trust, nay, expect, my readers will for its own sake, as well as for other reasons, excuse its insertion at some length here:—"Mr. Chamberlain recently mentioned this incident in a speech at Birmingham; and the present Duke thinks that the right hon. gentleman misrepresented the spirit of his noble grandfather's suggestion, and so is attacking the landlords 'with poisoned weapons.' Mr. Chamberlain said:—'There was only one class that profited, and that was the landlords, who continued to exact their rents. There was a great landlord in those days, the Duke of Norfolk, who recommended to the people that they should take a pinch of curry powder in water to keep off the pangs of hunger.' The Duke says he knows that his grandfather 'said what he did for a purely benevolent motive, and from a wish to make public anything he had heard which might be useful to those who were trying to relieve the sufferings of the starving people' (in Ireland).

"Mr. Chamberlain and the Duke of Norfolk are in error in assuming that the reference was made in connection with the Irish famine. It was reported by the *Times* under the heading, 'New Food for the Poor,' on December 10th, 1845. In the course of proposing the toast of 'the industrious labourers' at a dinner at Steyning, the noble Duke, whose words were reported verbatim because 'they excited so much sensation during delivery,' said:—'In India a vast portion of the population use it; in fact it is there to them what potatoes are in Ireland—I mean curry powder. If any gentleman will try and take a pinch and put it into hot water—I don't mean to say it will make a good soup; but this I say, that if a man comes home and has nothing better, it will make him warm and go to bed comfortable. (Laughter.) I mean to try it among my labourers, and by doing that I am sure that if the winter comes on severe we may add very much to the comforts of the poor.' ('Hear, hear,' and suppressed laughter.)

"There can be no doubt about the impression that these words (repeated in a modified form at Arundel two days later) created on the public mind at the time. On December 11th and 13th the *Times* had leaders upon the subject, in which it mentioned that pepper-water was used on the Conyngham estates in Ireland for the purpose of rendering the pangs of hunger less intolerable:—'There are no doubt many methods of taking away the desire to eat without resorting to the natural process of eating. His Grace appears to think that there is no harm in curtailing the food of the nation, if the nation can be brought to a comfortable state of apathy on the subject of diet.'

"At many meetings of the League references to his Grace's suggestion were freely made. Cobden often spoke of 'curry-powder candidates,' and at a meeting in the Guildhall, under the presidency of the Lord Mayor, on December 15th, Mr. Dillon said 'he saw in the recipe reason to believe that it was the intention of the noble Duke to excite the stomachs of the labouring population for the purpose of making them contented, and as quietly as possible submit to starvation.' So inviting a topic did not escape the notice of the satirist. 'Hannah Glasse' wrote for the Beefsteak Club:—'Take a duke, no matter how foolish, but the fatter the better; stew him down with "pepper and a variety of things of that description," and serve him up as the principal dish at an agricultural meeting—any fool can cut him up.' The Duke does not appear to have protested against the current view of his motives. It seems quite as likely that his grandson has misinterpreted them as that Mr. Chamberlain has wronged the memory of the inventor of 'Norfolk Sauce.'"

A Colonial Physician tells the following good story of his early struggles in his profession:—"I insinuated to a reverend friend how advantageous it would be to me if he would notice my being called occasionally out of church; and he did. Dr. Grosgrain, my chief competitor, also insisted on receiving clerical attention. The next Sunday a page-boy came running into the building and whispered to my opponent, who left immediately. The pastor who was about to begin his sermon, hesitated, and then said, 'Brethren, let us pray for a sick man who is in great danger—Dr. Grosgrain has been called to see him.' This settled the doctor, and left the field to me."

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Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

RICKETY CHILDREN.

The discussion on rickets at the meeting of the British Medical Association recently, directs the attention of the public, as well as the doctors, to a disease far more prevalent in Great Britain than is commonly supposed. Rickets is a disease wherein the bones soften and bend, and it cannot be too fully appreciated by the rich that it enters their doors as well as cottages, and is with them most likely to be overlooked.

Dr. Carmichael (Edinburgh) said "that rickets was not so uncommon as it was supposed by some to be among children in the better classes of society, where, certainly, the hygienic and dietetic conditions were more favourable than among the poorer classes. In his experience, however, he did not meet cases of aggravated rickets, cases of great deformity, among better-class patients; yet the disease was prevalent to a very great extent. But in consequence of deformities not existing to a great extent, these rickety conditions were often overlooked, especially in adipose rickety children. As to the popular eye these children were apparently extremely healthy, it required an acute medical eye to detect a rickety child." He agreed that the diet was the prime cause in these cases.

Dr. Cheadle, in an able paper, "referred to the case of the young lions in the Zoological Gardens. The cubs in that institution have been almost wholly rickety. The disease was so common that for a great many years it had been found impossible to rear a lion to the adult stage. Now, these whelps were given no milk—nothing but flesh, and that of the old, lean horse kind. Once a week they got a little goat's milk, which, as to fat, is about the same standard as venison. The meat given, therefore, supplied a minimum of fat, while the bones of an old horse were proof against the teeth even of an adult lion, and the whelps could make nothing of them. The last litter of cubs, born some fifteen months ago, were put on ordinary food. As before, they all became extremely rickety. Their bones were bent, they were almost helpless, and after three months one of them died. It occurred to the keepers or directors that something might be done to remedy matters by a change of diet. Accordingly, while the raw meat was continued as before, they were given, in addition, pounded bones, milk, and cod liver oil; and now, for the first time in the history of the Zoological Gardens, the lion cubs at fifteen months old were in absolute health."

The observations of Dr. Jacobi struck the nail fairly on the head. He said: "Digestive diseases of any kind would lead to rickets at an early age. He believed positively that there was no greater enemy to children's health, and no greater cause of rickets than cow's milk given as a regular food, *and without correction.* Cow's milk was different from that of a woman in many respects. It was certainly apt to derange digestion when given pure. Some children might thrive on it, but that they thrive on many things was no reason why these should be recommended as general food. Some children escaped everything."

It was pointed out that unless barley, &c., were added there would be an excess of gastric acids. The addition of a little Kepler Extract of Malt corrects this trouble, and if cream were not always at hand, the Kepler

Solution fulfils all requirements and prevents the oncome of rickety conditions. Peptonizing the milk and then adding the malt is a good plan, and insures against digestive troubles.

INJURIOUS INFLUENCES OF CITY LIFE.

By Walter B. Platt, M.D., F.R.C.S. (Eng.).

We do not intend to discuss in this paper the subjects of bad ventilation and impure air, imperfect drainage, damp cellars, or insufficient nourishment. Residents of the country may suffer from all these as well as dwellers in cities. There are, however, certain injurious influences more insidious in their operation, which are peculiar to cities, and affect the well-to-do as well as the poor, although not in equal degree. I believe these lead, sooner or later, to degeneration of the individual and his offspring, by producing progressive feebleness, and to ultimate extinction of such families as are long subjected to their force. I refer to those which chiefly affect the stability of the nervous system, rendering it less capable of sustained work, and, in a secondary way, only the circulation and general nutrition. The end-result of all these influences is to lessen the producing power of each man, and thus to depreciate his value as an economic factor. They ought not to exist if their removal be possible, and if it can be effected without greater expense than their ill effects warrant. Their cause is to be found in faulty municipal arrangements which can be largely corrected by intelligent action and supervision. They work by producing insomnia, aberrant forms of mental action, singling out those who are less strong as subjects of the so-called neurasthenia.

These effects accumulate with each successive generation subjected to their influence, until the final inheritor finds the load too heavy to bear and do any useful work. The ne'er-do-wells and idlers are often, not always, such, from actual inability for persistent effort. Let us see if such influences exist, if they are injurious to any considerable extent, and if it is practicable to remove or modify them.

We refer chiefly to three, and these are: 1. Disuse of the upper extremities for any considerable muscular exertion. 2. The incessant noise of a large city. 3. Jarring of the brain and spinal cord by continual treading upon the stone and brick pavements which make our sidewalks and streets.

We leave out of the question those to whom these observations do not apply—viz., such as are able to spend nearly half the year out of town. Experience has shown that such individuals and families suffer in small degree from an ordinary city life; while, on the other hand, good authorities assert that there are very few families now living in London who, with their predecessors, have resided there continuously for three generations.

If there is one general physical difference between the country-bred and the city-bred man, it lies in the size and strength of the muscles of the shoulder and arm. It is almost impossible for a man to live in the country without using the arms far more than the average city man. This use of the arms has, in both men and women, an important bearing on the general health, since it increases the capacity of the chest, and thereby the surface of lung tissue where the blood is spread out in thin-walled vessels through which the oxygen and carbonic acid easily pass in opposite directions, serving thus the double purpose of feeding the body more abundantly and of removing a constantly accumulating waste product.

This richer blood is again driven with greater force by increased heart and arterial action through its circuit. The vital organs are better nourished and the power to produce work is increased.

Few will deny that a well-nourished body can be trained to do more and better mental work than the same organism in a feebler state. Walking on an even surface, the only variety of physical exercise which most business and professional men get in town, is well known to be a poor substitute for arm-exertion. The reason is partially plain, since walking is almost automatic and involuntary. The walking mechanism is set in motion as we would turn an hour-glass, and requires little attention, much less volition and separate discharges of force from the brain-surface with each muscular contraction, as is the case with the great majority of *arm*-movements.

The arm-user is a higher animal than the leg-user. Arm-motions are more nearly associated with mental action than leg movements. A man's lower limbs merely carry his higher centres to his food or work. The latter must be executed with his arms and hands.

A third way in which arm exercise benefits the organism is through the nervous system. Whether this is due to an increased supply of richer, purer blood, or whether the continual discharge of motor impulses in some way stores up another variety of force, we do not know. One thing is certain, the victim of neurasthenia is very seldom an individual who daily uses his arms for muscular work; with this, the limit of hurtful mental work is seldom reached.

It seems evident that arm rather than leg movements are essential to increased productive power. If these are neglected, the man as a social factor degenerates and falls a prey to his stronger fellow-man in the race for supremacy and productiveness. It may be remarked that American gout, that condition of the blood which causes our English cousins pain in their feet, and Americans universal pains and increased irritability, has one sovereign remedy so simple that few will take it, and this is daily systematic arm-exercise. It is Nature's sedative, for which she charges nothing the next day, but gives us sleep instead of insomnia, and cheerfulness in place of discontent. A man may walk in an hour four miles on a city sidewalk, and reach his desk tired, exhausted of force, and better only for the open air and a slight increase of the circulation. Had he spent half that time in a well-ordered gymnasium, using chest and rowing-weights, and, after a sponge-bath, if he had gone by rapid transit to his office, he would have found his work of a very different colour, easier to do, and taking less time to perform it. The view for some time held by Hartwell, of the Johns Hopkins University, Sargent, of Harvard, and others, that arm-exercise prevents or does away with nervous irritability, and at the same time increases the absolute capacity for mental work, has not been sufficiently urged or accepted.

The remedy for this state of things is to cause every man and woman to realize the importance of arm-exercise. Make it compulsory in schools, and popular after leaving school. If one's occupation does not require it in itself, muscular exertion of some kind ought to be taken daily, with the same regularity as food and sleep, for all three are necessary to the fullest development of our powers.

A second injurious influence, which pertains exclusively to city life, is incessant noise. This may not be very

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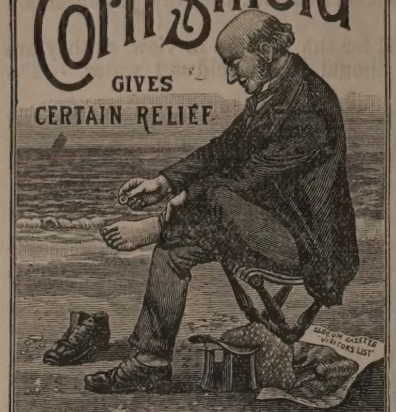

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intense at any time, but when continuous it acts as certainly upon the nervous system as water falling upon a harder or softer stone. Recent experiments upon animals subjected to the sound of a continuously vibrating tuning-fork for a number of hours, one or two days in all, show that the first effect is that of an irritant to the nerve-centres, as certainly as an acid or an electric shock is to muscle-fibre. A secondary visible effect is opacity of the crystalline lens of the eye.

(To be concluded.)

Eye Diseases in Schools.—No class of disease illustrates the effect of medical treatment and of sanitary measures in a more striking manner than do the various forms of ophthalmia. Some interesting details relating to the prevention of this troublesome disease are included in a report recently published by the managers of the Central London District School at Hanwell. This body of evidence has been accumulating since 1880, and contains observations on ophthalmia as witnessed among the children of more than twenty large district schools. These inquiries have resulted in a series of useful practical suggestions. Some of these relate solely to matters of general hygiene, while others refer more particularly to the management of the ocular malady. With the former, important though they doubtless are, we need not now concern ourselves; they are part and parcel of the general stock of medical knowledge, and are familiar to our readers. Among the latter, two may be particularly noticed. Both have evidently been framed in recognition of the infectious nature of the disease, and are, as preventive measures, well worthy of general adoption. The first implies a degree of isolation, and recommends that an ophthalmic ward should not contain more than twenty beds, and that they should be under the supervision of one trained nurse. The second provides a simple and effective substitute for the scrubbing-brush in the shape of bees-wax, the use of which on the floors of the wards is at once a guarantee for cleanliness and for dryness of atmosphere, which is in some ways more suitable than a moist air for cases of the kind in question. Both of these suggestions are of considerable practical value in view of the markedly contagious nature of some kinds of ophthalmia. Their efficiency is said to have been attested by a distinct reduction of the number of cases of this disease in Hanwell school, and we await with interest the report of the results attained by the same means in other similar establishments. The question of the degree of contagion resident in different cases of ophthalmia is by no means a simple one. It is almost certain, however, that the whole history of septic influences in their relation to inflammation might be read, as if in so many chapters, in the several forms of this disorder of the conjunctiva. Simple catarrh stands at the beginning of the series, and represents the real though nearly harmless infectiveness of a common cold. Between this form and the virulent disease of tropical climates there are other intermediate affections of allied character, in which probably the infective property varies in degree with the varying purity of atmosphere and the health and constitution of the person affected. There is, therefore, an evident need of such preventive measures as those above described. They are further commendable by their simplicity, and if carried out in future on a larger scale than hitherto will probably reduce, in a material degree, the dangers arising from ocular contagion.—*Lancet.*

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

THE STUFF THAT DREAMS ARE MADE OF.

By Meredith Clymer.

FIRST PAPER.

I. Sleep in man is the periodical rest of the brain with suspension of volitional muscular activity. The system of relation, by means of which man comes to know and is linked with the outside world and his fellow beings, is in abeyance for the sake of repose and repair. In perfect sleep there is a stoppage of sense-impressions, a locking up or deadening of consciousness. The system of maintenance of the individual, as digestion, respiration, secretion, is alone doing work, and that probably slowed to half or three-quarters speed. The only parts, then, of the nervous system inevitably active are those essential to the persistence of life—functions simply automatic and called orderly-reflex, which are as unperceived as if the fore-brain were wanting—a condition shown experimentally in animals after decapitation, or when the connection between the brain and spinal cord has been interrupted. Beheaded frogs will whisk of a drop of acid from their skin, make purpose-like defensive movements when pinched by a forceps, pushing their feet against the instrument; croak when the back is stroked, and take a sitting posture: all like will-acts with a whole brain, and yet they are necessarily only inconscient reflex instincts of the lower nervous centres. Dacoits, a band of thieves in India, steal a mattress from under a sleeper without waking him, first deepening sleep by fanning the victim, then tickling the part of the body next the operator, when the sleeper automatically edges away a little. The fanning and tickling are repeated till the man sidles quite off his bed.

A notion of the distinction between conscious volitional activity and that which is only automatic is essential to the right understanding of the phenomena of sleep. In the waking state, when a sensation comes to the gray cells of the forebrain, there is always a perception, which may or may not give rise to a will-act, while the reception of a stimulus by a lower centre gets only an automatic answer. Sleep is not a single state, but a series of states. This may be made plain by an analysis of an after dinner snooze, when "*cibum sequitur somnus;*" or of a catch-nap at church or in a carriage. For a while it is the "mystic middle state" 'twixt sleep and wake. When the exposition of sleep gains upon us, the eyelids grow heavy and droop, consciousness gets confused, we have a hazy notion of what is going on about us, and fancy often makes some play at the outposts of dreamland; there is gradual loosening of the muscular system, the eyelids close, the head bobs and then falls on the chest; and, as we steal away from our own company, the muscular sense—that by which we feel the possibilities of our muscles, and which gives us the notion of the presence of our bodies—is deadened and soon lost, as well as the intuition of time and space; and then we are "off." Lucretius's description is perfect:

> "*Debile fit corpus, languescunt omnia membra;*
> *Brachia, palpebræque cadunt, poplitesque cubanti*
> *Sæpe tama submittuntur, viresque resolvunt.*"

We are, to some extent, *en rapport* still with our

surroundings; consciousness is "scotched, not killed," dim impressions loiter, and a slight noise, a spoken word, even in a low tone, the stopping of the carriage or of the drowsing preacher, recall consciousness, for the moment a little dazed. If the doze has not been vexed, the awakening is by steps, and if we heed, we shall find that the muscular sense first goes on duty, and the certainty of the lower limbs is the earliest dawn of personality. In customary sleep, externality and the measure of the body are first lost, the mental images fading away last in clouding thoughts and flittering fancies.

The hypothesis that the mind apparatus is a complex of the rind cells of the fore-brain, made up of many organs, each having its fitting office, is built on the broad basis of observation and experiment. Gall's theory of multiple sites for the several mind faculties, though true in principle, was chained to a fictive skull-chart, which put it out of court. The plotting of the brain rind by later neurologists, known as "localization," is the outcome of tried and satisfying experiment and observation, and is, within limits, demonstrable. Its possibilities of development are large, if not spoiled in its cradle by over-forcing, and if, from time to time, it is put in the fining pot and assayed by what Goethe called active and self-conquering scepticism (*thätige u. selbstüber-windende Skepsis*).

Much of the brain is a dark continent, and mind is still the most obscure chapter of anthroposophy. The philosopher bows before its mystery, which passeth understanding, and owns that it can be studied only in its manifestations—states of consciousness. The tie between mind and matter is near, sure, and lasts while life lasts; but its nature is unknown, and modern science allows that it fails to find out the *catena* of causality that shall link them in a single line. They will never be reduced to a common term. Nevertheless there is a true blend, and we cannot consider the data of mind apart from the data of matter.

No brain no mind, no mind without a working brain. There is a necessitated correlation between the ποιεῖν and the οὐσία—the facts of phenomena and the facts of substance. Goethe said, No spirit without matter, no matter without spirit. The newest branch of psychology, psycho-physics, is doing much to give a closer touch to the understanding of many of the vexed problems of mind, and, not to overstate its strength, to free them from the conceits of metaphysics—the crackling of thorns under a pot—and the gyves of theology.

The study of mind on these lines is not a surrender to materialism, in the vague and unreasoned sense of the Philistine when he plants his scarecrow, and casts soil at Science in her loving and earnest striving after truth. Such twinship of mind and matter is thinkable, and in full agreement with the quests of modern science. "Truth," said Sir J. Herschel, "never can be opposed to truth."

From present proved data we have, then, full warranty to credit the hypothesis that the cell cluster of the rind are the material organs of mind by which its objective tokens are made known; that they are autonomous yet heteronomous, independent yet interlocked with a central power, and subject to its controlling and combining force, like our States and general government. In sleep these groups may be variously conditioned. Some may be resting or getting food, while others are wide awake, full fed, and kinetic.

Burton calls sleep "a binding of the outward senses, and of the common sense, for the preservation of body and soul;" and Lucretius says, "*jacet sine sensu corpus onustum.*" This notion of the shutting up of the five watchful senses—the closing of the sensory thoroughfares in sleep—is constantly repeated by poets, and even physiologists. It is, however, not a fact. In deep sleeps—*somnia vera*—common-value sensations are, probably, not perceived. But the absence or lessening of consciousness in sleep is not due to disability of the sense end-organs; they are in good form and fit for service, though, perhaps, a trifle dull. They are alive to the impact of the irritant, answer the call, and send off the message; but it fails to get heed at the central station, and does not, therefore, become a concept. There is either no subjective conversion of the objective impression at all, or it is imperfect. The shortcoming is not, then, in the end-organ, which does its work, but in the receiving one, which is not in good gear, or quite out, as sleep is deep or not. It fails to register, or registers faintly or amiss, as between sleeping and waking. It is a case of *non capiendo recipit;* what is offered is not laid hold on. It may be said that such is not the case with the organ of sight, for it is curtained by the lids and does not receive the stimulus. This objection is overruled by the facts of dreams and of somnambulism.

Psycho-physic methods have taught us how to ascertain the liminal intensity of the sleep-value, and the amount of intensive irritation needed at different stages to cause awakening. Kohlschütter ascertained, by direct measurement, that the intensity of sleep increases, at first quickly, then more slowly, until the end of the first hour (Möningshoff and Priesbergen say one and three-quarters), after which time it diminishes, at first quickly, then very slowly, reaching its terminal value at waking time. Often without apparent cause, though always on account of an excitation, there is a sudden lowering of intensity, attended by an inconscient movement of the limbs, sometimes by a partial turning over of the trunk, and even an utterance of words, generally incoherent; this is followed by an immediate deepening.

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—*Charles Mackay.*

VEGETABLE RENNET.

(Concluded.)

One of the most interesting of the plants which contain this ferment or vegetable rennet is the so-called "Naras" of the West Coast of Africa (*Acanthosicyos horrida*), a species of Cucurbitaceæ. The plant was described in detail by Welwitsch, in 1869, when its peculiar physiological property was unknown. A more detailed description, given by Marloth, has recently appeared, which deals, among other points, with this power. The plant is to be met with in dry, sandy, and desert places in Namaqua Land, Whale Bay, and the Mozambique district. It is very singular in its habit and appearance, consisting of long, spiny, weak-looking branches running almost on the surface of the sand, and being at intervals buried therein and again emerging. The stem is very short, so that the plant looks like a system of creeping, spiny branches, some of which measure twenty feet or more in length. The root-system is similarly developed, long-creeping roots, penetrating, in some cases, for a distance of 100 feet through the sand. The long, spiny branches seem destitute of leaves, for these are quickly deciduous and sometimes abortive, and while they remain upon the shoots they are closely adpressed to them, and are stiff and horny in texture. At the base of each leaf are two strong spines, which persist after the leaf has fallen. The flowers are borne in the axils of the leaves, between the spines. The male and female flowers are found on separate plants; the former are sessile, the latter shortly-stalked. The ripe fruit is of considerable size, much like an orange in appearance. It has a very powerful and pleasant aroma, and its pulp is very juicy and agreeable to the taste. In the unripe condition it is bitter and uneatable. According to Marloth, the natives eat it to very great excess, both fresh and in the form of "Naras cake," a preparation of it made by drying the expressed pulp and juice in the sun. The power to appreciate its excellence seems to be confined to the natives of the part, for strangers partaking of it for the first time are said to pass through strange and painful experiences after their banquet.

Its power of causing the clotting of milk is well known among the natives of the part, who use it freely for that purpose. The ferment is contained in considerable quantity in the juice, the pulp, and the rind of the fruit. It is absent from the branches, from the seeds, and from all parts of the unripe fruit. It is soluble, according to Marloth, in alcohol of sixty per cent. strength, an extract of the pulp made with that fluid retaining the power to coagulate the milk. It is not identical with the principle which gives the fragrance to the ripe fruit, nor to that which gives the bitter taste to it when still young. The ferment is destroyed by boiling, but will remain for an almost indefinite time in the dried rind. Marloth, in his experiments, found that an extract of pulp, dried to a friable condition in the sun, was quite active in causing coagulation. The writer had the opportunity recently of examining some dried rind and some old seeds.* An extract of these materials, made with five per cent. solution of common salt, showed the ferment in abundance in the rind, but absent from both the testa and the interior of the seeds.

Another plant, occurring nearer home, has the same property. This is the common yellow Galium (*G. verum*). In his "Popular Names of British Plants," Prior speaks of its peculiarity as being known in the sixteenth century, when Matthioli wrote of it, "Galium inde nomen sortitum est suum quod lac coagulet." In the West of England, particularly Somersetshire and Herefordshire, it is still the custom of dairymen to put this plant into the milk they have devoted to cheese-production, to "set" it. The plant has a long, straggling stem, bearing at short intervals whorls of small leaves, in the axils of which are numerous panicles of yellow flowers. The practice is to put the whole plant, or as much of it as is above-ground, into the milk; but the active principle seems to be located in the flowers. The white Galium (*G. Aparine*) is said to be devoid of the property.

The common traveller's joy (*Clematis Vitalba*) is another instance of the occurrence of this ferment. It is peculiar in one respect, the property appearing to be situated in the tissue of the stem, probably the soft bast. In most other cases it seems to be attached somehow to the reproductive parts of the plant. The quantity that can be extracted from Clematis is, however, much less than from the other plants spoken of.

The ferment has also been found in the petals of the artichoke (*Cynara Scolymus*).

An account of the occurrence of this vegetable rennet would not be complete without its including the researches of Dr. Sheridan Lea on *Withania coagulans* (Proceedings of the Royal Society, 1883). These have, besides their scientific value, a direct bearing upon the commercial aspect of the question. Many of the natives of India refuse to have anything to do with cheese prepared by means of animal rennet, and there is, consequently, there a large field for the employment of the plant. Some years ago, Surgeon-Major Aitchison sent home an account of the peculiar property of the Withania. The shrub grows freely in Afghanistan and Northern India, and the natives there have for a long time employed an aqueous extract of the capsules to curdle their milk. Some dried material sent from thence to Kew was used by Dr. Lea in his investigations. Withania is a genus of the order Solanaceæ, and has a capsular fruit, containing a large number of small seeds. In the dried material, these seeds were enveloped in a coating of a peculiar resinous matter, which was probably the dried juice of the capsules in which they had ripened. The ferment was found to exist to a very slight amount in the stalks of the fruits, and to be extremely abundant in the seeds. From the ground seeds it could be extracted easily by maceration with solution of common salt and by treatment with glycerine. So extracted, it was found to be destroyed on boiling, but to be able to withstand moderately-prolonged exposure to alcohol. Its activity in a fairly-strong extract was quite equal to that of most commercial samples of rennet prepared from the stomach. It could, moreover, be kept with as great security as the latter by the aid of common salt and a little alcohol. Its commercial value is somewhat interfered with by the presence in the seeds and in their extracts of a peculiar yellowish-brown colouring-matter, which cannot be separated without destroying the rennet.

Since the publication of Dr. Lea's researches, the writer has met with the ferment in the unripe seeds

* This material was kindly furnished by Mr. W. Thiselton Dyer, F.R.S., Director of the Royal Gardens, Kew.

of *Datura Stramonium*, a plant belonging to the same order, Solanaceæ. In this plant, though present in the unripe seeds, it appears to be absent from them when ripe. Its exact distribution is, however, not yet determined.

The occurrence of this property in so many plants, and these not at all closely connected in other ways, leads to the consideration of what must be its physiological significance. It is, perhaps, not difficult to see why rennet should occur in the stomachs of young animals whose food consists chiefly of milk; but its importance in the vegetable kingdom must be independent of such a function. Further researches, still in progress, may, perhaps, throw some light upon this point. It is significant, so far, to notice that its occurrence is mainly in those parts which are especially connected with the reproduction of the plant, a fact which seems to point to a possible function in connection with the storage of proteid food-materials for the nutrition of the embryo during germination.—*J. R. Green in "Nature."*

Magazines for September.—*The Century Magazine* will be read with interest for September, on account of the articles on Uppingham School and Edward Thring. Mr. Keenan's Siberian papers continue to prove interesting and attractive, and Mr. Holden's papers on "Sidereal Astronomy" add to the attractive character of the number. *Harper's Magazine* contains interesting articles on "Our Journey to the Hebrides," "Two Montana Cities," and "The Woodland Caribon." Mr. Black's novel, "In Far Lochaber," appears in its ninth part in the present number. The *Season* for September is, as usual, bright and useful in its details relating to dress and the toilet. It is, *par excellence*, the ladies' magazine of the month.

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By Professor John Simpson,

Superintendent of Schools, Mansfield, U.S.

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What will the World say?
In Honour Bound
The Dead Heart
In Love and War
For the King
Queen of the Meadow
In Pastures Green
The Flower of the Forest
A Heart's Problem
The Braes of Yarrow
Of High Degree
Fancy Free

By Mrs. OLIPHANT.

Whiteladies.

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Ready-Money Mortiboy
With Harp and Crown
This Son of Vulcan
My Little Girl
The Case of Mr. Lucraft
The Golden Butterfly
By Celia's Arbour
The Monks of Thelema
Twas in Trafalgar's Bay
The Seamy Side
The Ten Years' Tenant
The Chaplain of the Fleet
All Sorts and Conditions of Men
The Captains' Room
All in a Garden Fair
Dorothy Forster
Uncle Jack

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Gabriel Conroy
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Dust
Prince Saroni's Wife
Fortune's Fool
Beatrix Randolph

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Patricia Kemball
Leam Dundas
The World Well Lost
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With a Silken Thread
The Rebel of the Family
"My Love!"
Ione

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Under the Greenwood Tree.

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The Waterdale Neighbours
My Enemy's Daughter
A Fair Saxon
Linley Rochford
Miss Misanthrope
Donna Quixote
The Comet of a Season
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A Model Father
Joseph's Coat
Coals of Fire
By the Gate of the Sea
Val Strange
Hearts
The Way of the World
A Bit of Human Nature

The above is a Selection only. The Complete List of nearly FOUR HUNDRED NOVELS will be sent free upon application.

LONDON: CHATTO & WINDUS, PICCADILLY, W.

Imprudent marriages are, no doubt, a fruitful source of premature mortality which takes place all over the world. The death of one half of the human family under the age of puberty does not take place by virtue of any law of man's constitution, but from a disregard of the teachings of the laws of health. The conditions of civilized life compel obedience to a certain extent, but even these conditions are sometimes grossly violated, partly through ignorance and blindness of passion.

Influence of occupation and habits of life have a marked effect upon the healthiness or unhealthiness of mankind. All occupations have their peculiar dangers, which counterbalance each other. The tailor is not exposed to the effluvia of the slaughter-house as the butcher is, and yet he has exercise denied the tailor.

Mortality varies with density of population, locality, and climate. From the very necessity of things, the evils growing out of these conditions cannot be wholly overcome by man's agency, but much may be done to ameliorate these conditions. It is a popular notion that a cold winter is conducive to life, but statistics prove the reverse.

Extremes of cold and heat materially affect the health of communities.

The history of the earliest civilizations records the fact that law-makers and public functionaries gave their most earnest attention within their limited means to the maintenance of the health and life of communities. It seems, in the last few years only, that the general public is becoming awakened to the importance of this subject, and thinks it is only of modern origin. Indeed, there seems to be a decay in the knowledge of the art of healing during the Middle Ages; and after this mental darkness began to disappear by the dissemination of Christian principles, an utter misconception of doctrine led to the neglect of all care of the human body.

The monks and friars gave themselves entirely to good works, as ministering to the sick, sheltering and clothing the homeless; but made no advances whatever in the possible prevention of disease. The neglect of ventilation and cleanliness of person, the accumulation of filth in their abodes, the poor quality of food, which was more poorly prepared, never entered their pious minds; and when disease and death overflowed their land, it was supposed to be a manifestation of God's special anger.

If we look back anterior to mediæval times, we find that great attention was given to the public health-code by Jews, Greeks, Romans, and other nationalities not so far advanced in civilization.

The Roman people, intellectually crude as they were, and given to military matters to such an extent as hardly to find time to cultivate their lands, constructed a complete and stupendous system of drainage and sewerage for the city. Later, the immense aqueducts extending for miles were built to supply the city with the best water, and their splendid ruins at the present day attest the munificence and bountiful supply of the chiefest of sanitary requisites.

Free ventilation and good drainage were a recognized necessity among the Romans. A college of physicians was formed, whose duty it was to attend to the public health. The Theodosian and Justinian codes describe the modes of election of these state physicians.

The peoples of the present have been slow to profit by the good examples of the ancients, although all classes are far in advance in intelligence, in obligations to their fellow-man, and in their desire to ameliorate human suffering.

The first outbreak of cholera in this country, deplorable as it was in itself, was a great advantage in directing the public mind to the all-important subject of the prevention and stamping out of contagious diseases, It was a known fact that while the poor, living in unventilated and undrained hovels, with poor food and uncleanly habits, fell victims to this mysterious disease in large numbers, the better classes were comparatively safe.

In England investigations into the dwellings and domestic habits of the lowest class of the population revealed a state of things of which the general public had no conception. In consequence a new poor-law was passed, and a committee was appointed to examine into its workings. The report, says Professor Gardner, on the "Sanitary Condition of the Labouring Population of Great Britain," in 1834, principally treating of the sanitary condition of the poor, and the character of their dwellings, may be regarded as the true starting-point of modern sanitary legislation.

Fifty years ago in the populous cities of England and of the European Continent, we find the beginnings of this science in almost hopeless and aimless confusion; but its growth since then has been steady and immensely valuable. Harmony and order have been brought out of chaos, and a determinate method, and an approach to scientific exactness are assured.

The public mind should become better acquainted with the benefits which these investigations afford, and should strengthen and enlarge the fabric which is so ably supported by the strong arm of the medical fraternity.

One of the most important sanitary agents is the air—more properly the atmosphere, because it is the atmosphere we breathe with its ingredients so deleterious to health. The amount of air necessary to supply the respiratory organs so as to preserve a healthy condition of all the functions of the body is a question little thought of by the masses. People pursuing different avocations and in various circumstances in life must be supplied with fresh air commensurate with their wants.

In workshops, prisons, theatres, schools, mines, and hospitals the quantity varies greatly, and it is only by actual measurement that two or even three times as much pure air is required in some cases than in others to keep the carbonic acid at its normal proportions, and to remove the effluvia caused by the exudation of animal matter through the pores of the skin. It is difficult to determine the supply of fresh air required in various kinds of sickness; but an intelligent public should give its best thought to the sanitary condition of the sick-room, that the greatest comfort to the sick may be attained, and a speedy restoration to health be secured.

Effluvia and organic vapours of various kinds become developed in every occupied dwelling from daily cooking; and organic substances saturate all textile fabrics and become a fruitful source of disease. Ventilation is essential to eradicate these noxious vapours, and every room should be thoroughly aired each day by a current of fresh air sufficient to renovate its atmosphere and remove all impurities.

But the atmosphere itself may be filled with impurities, such as suspended matters, gaseous substances, and impurities from special causes. Some of these have a marked effect upon the health of various tradesmen.

In the vicinity of large factories, and in densely populated cities, the air becomes vitiated by the particles given off from the materials used in manufacturing and floating in the air; and by the continuous inhalation of impurities which affect the proper aeration of the blood. The proper regulations of the surrounding conditions of

the body to the individual, family, or community are among the first subjects of importance in a hygienic point of view. The interests in which a large number of people are involved are not always subject to their control; but the habitation of the small tradesman and the farmer can frequently be placed in such a locality as to secure thorough drainage.

This will insure freedom from the hurtful and insidious effects of the slow accumulations and stagnation of refuse substances.

The great purifiers of the atmosphere are diffusion, heat, cold, the action of the winds, and the fall of rain.

In sick-rooms, and in abodes infected with contagious disease, the agents ordinarily known as disinfectants are employed. Charcoal, dried earth, carbolates of lime and magnesia, are common among the solids. Among liquids and gases there are various substances held in the highest esteem, and which are readily accessible.

The chief impurities of water, the means of detecting them, and the modes of purification ought to be well known to the public.

Soil and climate occupy no unimportant place in the factors relating to health.

The porous nature of soil is conducive to the general health of a people. In regions broken by hills and mountain ranges the unhealthy portions are enclosed valleys and ravines where the air stagnates, and in clay soils where water is stored up, unless good drainage is afforded.

The climatic relations connected with the air have a marked influence upon the conditions affecting human life.

Temperature, humidity, movement, composition, and weight of the atmosphere are the most important. In emigration nationalities usually seek the same climatic conditions which exist in their native country, because they seem to flourish best under such conditions.

The quality and quantity of food, and the regularity with which it is taken, are of much hygienic importance. Food should be nutritious, of good quality, and properly cooked. The quantity of different kinds of food required for different persons and under varying conditions obviously fall within the domain of this subject.

The diseases connected with food are various and important. Deficiency and bad quality of food are sources of epidemic disease, generally fevers, and these of the most fatal kind.

The catalogue of causes affecting public health is entirely too long to be recounted here.

The medical profession is awakened to greater interest in the subject than ever before, and why should not the people generally manifest an equal interest in a matter affecting themselves, and in which they are capable of accomplishing great good.

Local authorities should be alive to their duties when informed by the State authorities.

The people should make themselves familiar with the general features of the localities where they live, with their previous sanitary state, with their existing provisions for health, with their soils, water, burial grounds, climatic conditions, and with whatever is necessary to secure healthfulness and long life.

As Lord Derby says: "With a low average of popular health you will have a low average of national morality, and probably also of national intellect."

Drunkenness and vice of other kinds will flourish in such a soil, and you cannot get healthy brains to grow on unhealthy bodies.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

The Cotton-String Cure.—Last October an article appeared in the *Nineteenth Century* entitled "Strange Medicines," by Miss C. F. Gordon Cumming. To her very interesting list I would like to add a strange remedy, or method of cure, which has come to my knowledge since reading the above-mentioned article. To this day, in some parts of Indiana, there is practised what is called "*measuring*" for "*flesh-decay*." As far as my information goes, this remedy is only applied to infants. By "flesh-decay" is meant the pining or wasting away sometimes noticed in babies—who, for no very apparent reason, become fretful, thin, and puling. In such cases, in regions where the superstition I am trying to describe prevails, instead of calling in a regular physician, some old or middle-aged woman is sent for to "measure" the sick child. The process is performed thus: The baby is undressed and laid flat on a bed, as flat and straight as possible; then any common cotton string is taken in the hands of the performer, and carefully and accurately, from the crown of its head to the soles of its feet, the string is stretched over the body, to ascertain its exact length. This length is cut off and given the parents of the child, who are told to bury it in the earth in some obscure corner; and the belief is that when that string begins to decay, the child will begin to recover. My informant, who recently came to this State from Indiana, has seen this done, and knows of its being done many times. I cannot find out how the supposed gift to cure thus comes to be credited to certain persons. As far as the observation of my informant went, in cases where the "measuring" process was used to cure "flesh-decay," the sick child, when it did begin to improve, began to do so much sooner than the buried cotton string would have in all probability begun to decay. That babies sometimes took a decided turn for the better after the "measuring" process can, it seems to me, be accounted for in this way: Sick people, and especially children, are, by the most eminent physicians and experienced nurses, recognized to be very susceptible to the feelings of those around them: *i.e.*, if those around are very anxious and discouraged about their condition, it has a depressing influence on the invalid; whereas an atmosphere of cheerfulness and hope helps them to recover. In the above case, the parents and relatives of the sick baby who has been "measured," having perfect faith in the efficacy of the cure, would, after the performance, surround the little sufferer with an atmosphere more favourable to its recovery. Besides this, as near as I could find out, the persons used to wield this cotton-string cure were fat, motherly old dames, whose manipulations of the sick child while smoothing it out on the bed to get it straight, would be likely to have a soothing, revivifying effect. But I am here entering on that mystic theme, the relations of mind to matter, which I feel far too unlearned to discuss.—*Mrs. Towner in the "Popular Science Monthly."*

How Chicory is Prepared, &c.—The chicory root somewhat resembles a parsnip. The stem rises to a height of two or three feet, the leaves round the base being toothed, not unlike those of the dandelion—indeed, it is closely allied to that plant. The preparation of chicory,

as carried out in Belgium, is very simple. The older white roots are selected, cleaned, sliced, and kiln-dried, and are then ready for the manufacturer. It is roasted in an iron cylinder, called a drum, which revolves over a coke furnace. When taken out it is of a dark brown coffee colour, and while hot it is soft and pliable, but after being raked out and subjected to a draught of cold air it becomes hard and crisp, and is then ready for the mill. From the mill the powder is passed through a cylinder sieve, from which it emerges as fine as flour, and the partially ground pieces of foreign matter that may have found their way into the chicory drop into a separate bin. The shades of colour vary occasionally to suit the taste of the purchaser. The chicory root is cultivated in Belgium, Holland, France, and Germany. In Belgium, where it is also used as a vegetable, it is very extensively grown, its culture and manufacture (both of which are unrestricted) forming two of the greatest industries of the country. Its infusion is largely drunk as an independent beverage. For home consumption it is put up in small round and square packets of various weights, with highly-coloured and attractive-looking labels, and so dispensed to the public, who can also purchase it in a loose state, as we do here. To preserve it in good condition, chicory should be kept in tightly-closed tin boxes, and in a very dry place, otherwise it will become lumpy and rank. Instead of being ground down to a fine powder, chicory is also granulated. This is for exportation, as in this state it can be packed loosely in barrels, and is less likely to deteriorate. Large quantities prepared both ways are annually shipped from Belgium to all parts of the world. Chicory is distinguished from coffee by the presence of sugar, by the large quantity of silica contained in its ash, by the red colour of its ash, due to the presence of iron, by the fact that it gives a colour to cold water, in consequence of the caramel produced by roasting, and by the appearance of its structure under the microscope. When mixed with coffee, it can be detected by sprinkling a little on the surface of cold water, when the chicory will sink to the bottom, and the water quickly becomes a deep brown tint. Coffee, in consequence of containing a quantity of essential oil, floats on the surface of the water.

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Ingrowing Toe-Nail.—Dr. B. Cotting, in the Boston *Medical and Surgical Journal*, describes the method of operating on this painful condition that he has practised with success for many years. It consists of removing the diseased soft tissues from the nail, and not, as is usually done, the nail from the soft tissues. He removes with a knife the diseased fleshy parts, together with a large and thick slice of the healthy and adjoining side of the toe; the edge of the nail should be exposed, but not injured. Dr. Cotting regards this as the simplest operation ever devised for the relief of ingrowing toe-nail. As the wound heals, the remnants of the lateral fleshy nail furrow, if any remain, together with the soft parts adjoining, are drawn in by the contraction, and in this manner are kept away from the edge of the nail. Thus the nail after this, in its ordinary growth, has nothing to imbed itself in, or even to impinge upon, and a return of the affection is out of the question.

Shellac can be freed from wax, it is said, by boiling it with a moderately dilute solution of carbonate of soda; the wax separates and can be filtered off; whilst the shellac is separated from the filtrate by the addition of an acid, and when melted has the hardness of the original shellac. Like the latter it is softened but not melted by boiling water.

Sanitary Appliances, Etc.

BRAND'S BEEF BOUILLON.

The introduction into English life of "bouillon" as a common article of diet, marks a welcome advance in the practical dietetics of the day. This article should supersede the many worthless "beef extracts" and similar articles, erroneously regarded as containing nutritive qualities. Messrs. Brand & Co.'s "Beef Bouillon" comes before the public with the sure guarantee of high excellence derived from the fame of the manufactures of this firm. By the simple addition of boiling water added to a teaspoonful of this "Bouillon," a cup of highly nutritious fluid can be made; the cost not exceeding 2d. per half pint. This Bouillon makes a thoroughly reliable food at a cost which must certainly be considered of the most moderate kind when the price of butcher meat is considered. Messrs. Brand & Co.'s "Beef Bouillon" is made from the finest materials only, and if this nutritious beverage could only be introduced to the masses in place of alcoholic liquors, we should confidently expect to find a proportionate reduction of the prevailing intemperance. The "Beef Bouillon" is sold in tins which are sealed with a patent "band-opener." For breakfast, lunch, or dinner this handy fluid may be used, and we recommend it as an excellent substitute for tea and coffee, in that it is a true food.

MILK IN POWDER.

The ingenuity of man is ever on the pioneer's course of the world's progress. At one time there used to be no difficulty in procuring milk fresh from the cow for man, woman, and child; later on, the increase of the latter became so enormous that the supplies of the pure article became so scarce, owing to the increased demand, that dishonest vendors had recourse to the vile practice of manufacturing from chalk and other adulterants a liquid to which was added a small quantity of milk; and this was sold to the unsuspicious consumer for the richest milk the cow with the crumpled horn could produce. But now, thanks to the rapid strides of science, there need be no fear of such abominations being offered for sale as pure milk; at least, if there is any such fear, the community of consumers may rest satisfied with the vigilance of the Government Inspectors to protect their interest as far as possible. It will be good news to many thousands of mothers, however, to know that they need not now put their faith even in the astute inspector, as we have just received samples of a milk in powder which, if added to a small quantity of hot water, will yield rich and pure milk—certainly the richest we have had the pleasure of consuming for many a long day. The pioneers in this instance are the St. Gall "Swiss Milk Company," Switzerland, represented in this country by Mr. Carl Lawinski, 50, Mark-lane, London, E.C., who, by a scientific process, evaporate the water which the milk, contains when taken from the cow, leaving behind a dry, lactic powder, which cannot but commend itself to everyone who can enjoy pure, rich milk.

HOW TO MAKE BOTANIC BEER.

The demand in these latter days for light and non-intoxicating beverages which may be safely employed, not only in the warm weather of summer, but as refreshing drinks "all the year round," has materially increased, on account, probably, of the teachings regarding the injurious nature of alcoholics as commonly used.

The difficulty of obtaining a beverage which, in addition to being palatable, possesses invigorating qualities, and is of thoroughly innocuous nature has been one by no means easy to overcome. Messrs. Newball & Mason, Chemists, Park-place, Nottingham, have, however, solved the problem in question by producing a "Botanic Beer," which, after examination, we find warrants their description thereof, as a safe and non-intoxicating beverage, well adapted for use in all circumstances where such a drink is desired. The herbs used in the manufacture of this beer are yarrow, dandelion, comfrey, and horehound—all well-known "simples" of herbalists, and held in high repute for their mild medicinal qualities. A tablespoonful of the extract of these herbs (sold in bottles at a cheap rate by the firm in question) makes a gallon of "Botanic Beer" when employed according to the directions given with each bottle; while, by the use of Mason's "Foamine," a sparkling and creamy "head" can be imparted to the beverage.

For use in summer, not only by agricultural labourers and others exposed to great heat, but, indeed, by all classes, we may recommend the extract of herbs of Messrs. Newball & Mason. The resulting beverage differs from other "botanic beers" in its really pleasant taste, and it should therefore become a favourite with those who desire a safe and non-intoxicating drink. In

"ELECTRICITY IS LIFE."
(TRADE MARK.)

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WORLD-FAMED

GALVANIC BELTS,

FOR the CURE of NERVOUS DISEASES.
HAVE RECEIVED TESTIMONIALS from
THREE PHYSICIANS to
HER MAJESTY the QUEEN,
THE ACADÉMIE DE MÉDECINE of Paris and
FORTY MEMBERS of the
ROYAL COLLEGE of PHYSICIANS of LONDON.

RECENT TESTIMONIALS.

GALVANISM and SLEEPLESSNESS and PAINS in the LEGS.

Caterham, Surrey, August 9, 1888.

Sir,—I have much pleasure in sending you word that your Galvanic Belt has quite removed the severe pains in my legs which I suffered from, and I can now sleep well at night. My bladder is much stronger, and I am better in every way, and I consider your treatment the greatest blessing. I shall recommend your Belts to every one.—Yours faithfully,

J. L. Pulvermacher, Esq., 194, Regent-street, W. JOHN SCANLON.

GALVANISM *v.* RHEUMATISM.

39, Linaker-street, Southport, August 4th, 1888.

Gentlemen,—In May last I purchased a Galvanic Belt from you for Rheumatism, and after wearing it for three days, to my astonishment I could point my foot and walk with it, and now I can walk a couple of miles and can get both my hands over my head.

I am in my seventieth year, and before I used your Belt I had great difficulty in walking across the room, and could only just get my right hand to my mouth to feed myself, but I could not touch my lips with my left hand, and despair seemed to be getting fast hold of me.—Yours gratefully,

D. CORDINGLEY.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

11, Magdalen-terrace, Ripon, 19th July, 1888.

Dear Sir, I ought to have written to you before to tell you that I am now quite well again, and I have not the least doubt that your Galvanic Belt has done me a wonderful amount of good. I only wore it for two months, when it quite restored me. I recommend your treatment wherever I can.—Yours very truly, J. J. SIMPSON.

J. L. Pulvermacher, Esq., 194, Regent-street, W.

GALVANISM *v.* NERVOUS DEBILITY.

67, Huskisson-street, Liverpool, July 10th, 1888.

Dear Sir,—I have been really impatient to tell you of the good results of your treatment in my case.

An improvement began the day I put the belt on, and with trifling exceptions I have not suffered from that excessive weakness since.

I feel quite enthusiastic about your method, and have strongly recommended it to my friends.—Yours faithfully, A. BROADFOOT.

J. L. Pulvermacher, Esq., 194, Regent-street, W.

GALVANISM *v.* NERVOUS DEPRESSION.

High-street, Borough, S.E., July 4th, 1888.

Gentlemen,—I am pleased to inform you that your Galvanic treatment has greatly benefited me, in giving me renewed energy, and I am now quite free from the nervous depression which I experienced so much before wearing your Belts. My sleep is sound and refreshing, my bowels are regular, my appetite good, and my appearance much improved in every way.—Yours respectfully, E. CAYNE.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* INDIGESTION.

Deans Hospital, Westoe, South Shields, June 26th, 1888.

Gentlemen,—I am pleased to say that I have received great benefit from your Galvanic Stomach Belt. I am now able to take my meals regularly and without those disagreeable symptoms I was hitherto subject to, and your treatment has toned up my general nervous system.—Yours truly,

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W. J. S. COOPER.

GALVANISM *v.* LOSS OF NERVE POWER.

Oxton, Birkenhead, June 25th, 1888.

Dear Sirs,—It is only due to you to state that your Galvanic Combined Band has been very effective in restoring nervous power to my daughter, for which she is very grateful.

I have much pleasure in frequently recommending your appliances, having witnessed their effectiveness in so many instances in my own family.—Yours faithfully, H. HOPE.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

The distressing symptoms of Nervous Exhaustion and Debility are speedily removed by means of PULVERMACHER'S world-famed GALVANIC BELTS, which are so arranged as to convey a powerful electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of waste and decay.

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FOR FURTHER TESTIMONIALS, both Medical and Private, see new Pamphlet, "GALVANISM: NATURE'S CHIEF RESTORER OF IMPAIRED VITAL ENERGY," post free on application to

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194, REGENT-STREET, LONDON, W. (nearly opposite Conduit-street).

addition, we may note that this firm manufacture "Wine Essences," suitable for making unfermented temperance wines, Ginger Extract, Lemonine, and other substances intended for the easy manufacture of Ginger Beer, Lemonade, and like beverages. Their extracts are all prepared *in vacuo* by aid of special machinery, and by a process ensuring the preservation of the full strength and aroma of the substances employed.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. **All questions are answered free of charge in the columns of HEALTH.**
2. **All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.***
3. **Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.**
4. **Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.**
5. **Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.**
6. **From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.**
7. **No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.**

LETTERS TO THE EDITOR.

CIGARETTE-SMOKING.

SIR,—In the *Standard* of the 21st inst., a letter appeared condemning the smoking of foreign cigarettes, apparently written by one who is aware of the dangers which the ordinary cigarette contains for all who indulge in it. This question has been gone into by you in previous numbers of your valuable journal; therefore, I will not now dilate on cigarette-smoking and its consequences. My present object is to bring before your numerous readers—those of them, especially, who must smoke cigarettes—a new speciality. I myself am one who does indulge and feel healthier and stronger by so doing; but I am too old a smoker to go in for every or any class of cigarette—I used to, and paid the penalty. I now use a tobacco to which is added a certain proportion of the Coca plant, well-known for its stimulating and nerve-strengthening properties. This tobacco is supplied in cigarettes to me by the French Hygienic Society. It is, without question, the only cigarette I can get which does me good to smoke. I trust, therefore, in the interest of all who must indulge in the bewitching cigarette, that you will find space for this letter, and make known the only cigarette that will give a smoker satisfaction and add to his health and strength.—I am, yours obediently, SEPTICIDE.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER

of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor.*]

[Several replies have been crushed out of the present issue, owing to pressure on our correspondence-pages. These delayed replies will be given in our next number.]

ABEL PARK.—The person you consult is a quack. Read the pamphlet advertised in our pages, "A Lecture to Young Men," free by post for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.

O. O.—A swelling of the nature you describe should be seen by a surgeon. It is probably nothing very serious, but your only safe course is to consult a doctor. There is evidently some source of irritation which only a personal examination of your case can detect.

MARK L.—Take twenty drops of Cascara Cordial once or twice daily, an hour before your food, in water, and when digestive action has thereby been induced, follow up and aid your cure by taking Grant's Oat Flour, stewed fruits (apples and prunes), corn-flour, and like dietary. Avoid tea and coffee as much as possible, and give up taking pills and aperients. Take also Dahl's Cakes.

GINGER.—Read the pamphlet "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and follow out the directions therein given regarding diet and tonics.

SETH BRUCE. — Spray the throat with a little Hazeline and warm water, say one part to five of water. See article on Hazeline in HEALTH No. 217.

BEATH.—Take five drops of spirits of camphor on a piece of sugar occasionally.

NUMBER NIP. — In such a case we recommend you to use a belladonna suppository, containing a quarter grain of belladonna, at night. Internally, take twenty grains bromide of potash in water twice daily between meals, so long as your symptoms last. A hot hip-bath at night will also assist your cure.

CABINE.—Apply a little black wash on cotton wool to the parts, keeping the cotton wool always moist. Internally, take a dose of Lamplough's Pyretic Saline occasionally.

ETHEL GRAY.—You suffer from a form of acne or blackheads. Read the article in HEALTH, No. 199, on that subject, and follow out the treatment there directed. Your skin-action is deficient. Pepper's Sulpholine Lotion will be likely to do good.

M. B. B.—The little sixpenny manual on the "Law of Landlord and Tenant," published by Griffith & Farran, should suit your purpose.

A. M. F. F.—Take the following tonic:—Citrate of iron and ammonia, one drachm; syrup of orange-peel, half an ounce; water, eight ounces. Mix. Label: "Two tablespoonfuls to be taken thrice daily before food."

SEXTUS.—A hair-lotion adapted to promote growth is made as follows:—Tincture of nux vomica, three drachms; distilled vinegar, two and a half ounces; tincture of capsicum, one drachm; tincture of cantharides, six drachms; spirits of rosemary, one ounce; rose water to make up six ounces. Rub a little into the roots of the hair each morning.

W. HEAD.—Rest after your meals; avoid vegetables; take light foods—soups, milk, while fish boiled; light puddings, &c., for a time, and try Fairchild's Powders. If acidity is present you may try the following;—Subnitrate of bismuth, six grains; carbonate of magnesia, ten grains; powdered gum arabic, twenty grains. Mix to form a powder. Stir in a cup of boiled milk, and, when cool, stir up again before being swallowed. To be taken twice daily after food.

POLICEMAN.—Quacks always write in the style you name, because they can only succeed thus in terrifying their victims into consultation by causing them to imagine they are afflicted with serious disease. You will find your questions answered and your mind relieved of apprehension by reading the pamphlet recommended to "Ginger" in the present number.

C. E.—It is probable your ailment arises from slight want of tone. Try the effect of taking a teaspoonful of Syrup of the Hypophosphites in a wineglass of water, twice daily, after your food.

FORTISSIMUS.—Try fifteen drops Collis Browne's Chlorodyne in a little water when your symptoms trouble you, and repeat the dose in four hours if not relieved.

TOM MARTINE.—Take twenty drops of Cascara Cordial in water once or twice daily between meals for a few days; use also Dahl's Cakes. This treatment will relieve your symptoms, and correct constipation, from which piles usually arise. You should thereafter attend strictly to your diet, which should be very light (soups, milk, white boiled fish, poached eggs, milk puddings, stewed fruits, corn-flour, &c., and little solid flesh meat) but nutritious. Try Bayley's Cure (17, Cockspur-street, Pall-mall, S.W.).

ALBERT RAE. — When the piles are painful, use Quebascho Extract as an injection, by adding a teaspoonful to a tumbler of hot water, and by using the fluid after it has cooled. Bayley's Remedies (17, Cockspur-street, London, W.) are also excellent.

A VERY IMPORTANT MATTER.

THERE is no use denying the statement that there is a strong prejudice against the use of patent medicines. This arises from two sources. One is the invariable condemnation of such medicines without discrimination by the medical profession; and the other is the palming off of worthless and poisonous nostrums on credulous people. Many persons who are sick and unable to secure aid from doctors would resort to patent medicines if they were assured that the remedy would have good effect on the disease. Of course the manufacturers of these patent nostrums assert that their medicines are free from poison, but they would not dare to have their compounds submitted to chemical examination. Messrs. H. H. Warner & Co., however, not only assure the public that their remedies are pure and wholesome, but they are absolutely so, as will be seen from the following report of an examination made by George Hand-Smith, M.A., M.D., the well-known analytical chemist:—

Laboratory of Analytical and Applied Chemistry, 74, College-street, South Kensington, London, July 21st, 1888.—Messrs. H. H. Warner & Co., Clerkenwell-road, E.C.—In accordance with your instructions, I have made a careful examination of the medicines included under the title of "Warner's SAFE Remedies," and find them entirely free from mercury, and also from any poisonous or deleterious ingredients. They may be taken with perfect safety. The processes for their preparation are conducted under thoroughly medical and pharmaceutical direction, and with the most modern and effective methods for insuring great purity, strength, and uniformity. (Signed) GEORGE HAND-SMITH, M.A., M.D.

Warner's SAFE Cure can be procured of all chemists throughout the world at 4s. 6d. per bottle, or direct of H. H. Warner & Co., 86, Clerkenwell-road, London, E.C.

K. P.—We advise you not to employ a pan-closet, as it will be perpetually getting out of order and is sanitarily offensive. Try Twyford's National or Unitas, or other of this maker's closets, made in one piece, and easily cleansed. Where any powder is needed, use "Sanitas" powder, sold in tins, and sprinkle into the water of the closet-basin.

PATRICK.—We should advise absolute rest before and at the periods named. This is in itself a curative measure. In addition, try the effect of giving one antipyrin tabloid (five grains each) every two hours until four tabloids have been taken, when the pains are severe, repeating these doses next day, if necessary. The tabloids are to be had from druggists, and are made by Messrs. Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C.

EXETER.—The child should have Mellin's Food only till it can be weaned. Starchy foods are injurious to infants under eight months of age.

DAVID SMALL.—We advise you to exercise great cleanliness, and to wash all irritated parts regularly with Bayley's Soap and tepid water. If the irritation is very great, apply, after washing, a little of a lotion composed of bicarbonate of soda, one drachm; glycerine, an ounce and a half.

CHESIL.—Your question is one which can only be satisfactorily answered after examination by a physician. Send us stamped, addressed envelope, and we will forward you address of a competent physician. In such a case as yours we advise you not to delay having such an opinion.

PRETORIA.—Give Allen & Hanbury's "Tonga" for neuralgia. You must also look well, of course, to your general health; clothe warmly, and avoid chills.

MAB.—Superfluous hairs can only be satisfactorily removed by electrical means. Read the article on this subject in HEALTH No. 149. We can send, if desired, on receipt of stamped addressed envelope, address of a specialist who removes hairs in this way.

A. MORLEY.—If the application of zinc ointment, on lint, to the parts daily (with Bayley's Soap used in washing) does not suffice to cure you, we strongly advice you to see a surgeon.

SOLD.—A quack production. No respectable English physician or surgeon advertises in the newspapers. If you wish address of a reliable London surgeon, see rule 4 to correspondents at top of "Letter-box" page.

GRUB.—Are you sure your vests are of pure wool? Such eruptions as you name are not uncommon as the result of wearing impure fabrics. Try those of the Cellular Clothing Company.

BOSJESMAN.—Send us stamped addressed envelope and we will write you on the subject. There is little doubt that although you regard the matter with concern it may readily be explained in another way than that named. What you suspect is impossible. We will, however, write you more fully.

JOHN SINCLAIR.—Try applying hot (dry) salt in a flannel bag to the affected parts. Let the food be of nourishing kind and give fifteen drops Fer Bravais in water, thrice daily, after food.

NEOPHAM.—Get some honey and borax from your druggist, and use it as an application to the tongue. Also allow a chlorate of potash tabloid to dissolve in the mouth occasionally, and, internally, take fifteen drops of tincture of the perchloride of iron, in half a tumbler of water, after your meals, twice daily. If not cured, write again.

A PRINTER. — Try a dose of Cascara Cordial—*i.e.*, take twenty drops in water, an hour before food, once daily. Give up all tea and coffee, continue the use of vegetables and stewed fruits, and take Scott's Midlothian Oat Flour to breakfast and supper. You are most unwise in taking pills and aperients in your case. The value of Cascara is that it usually induces digestive action, which care in diet will serve to render permanent. Use also Dahl's Cakes.

SANITAS. — We had not heard of the remedy in question as applied for the cure of fever. We shall keep your extract by us for future reference.

E. A. M.—The foundation of all modern house drainage is the complete separation of the house from the sewer by means of suitable traps. Why not take the opinion of such firms as Messrs. Sharp & Co., Banner, or Boyle.

ARTIST.—See article regarding the peptonization of food in HEALTH No. 177, page 340. The Fairchild's Powders for peptonizing milk can be had from Messrs. Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C.

SHORT AND SWEET.—The latter person you name is certainly a notorious London quack. If any medical man advertises, he is to be avoided.

CHERRY.—For acidity after meals, take one or two of the Vichy Pastilles. These will correct the acidity; but you must exercise great care in diet. Avoid salt and sweet foods, pastry, &c.

BY PROXY.—The Coca Tobacco might be tried. If it fails, try Marshall's Cubeb Cigarettes for your chest ailment.

BARBARA.—You have been pursuing vegetarianism to the hurt of your health. This unqualified rushing to any food-system without carefully studying its effects on the individual is rash and unwise. All your weakness will disappear if you return to an ordinary and more rational form of diet. Take daily so much flesh-food; white boiled fish will also suit you, and at dinner drink a little Bokõl or nourishing stout. Let us hear how you are in a week or two.

D. CAMPBELL.—Inhale at bedtime the vapour arising from a pint of very hot water to which a teaspoonful of Friar's Balsam has been added, and after your meals take a dessertspoonful of Möller's or Scott's Pure Cod Oil. These remedies should cure you, and if you can have a change of air, so much the better. Write again, if not cured.

GRAHAM.—Your ideas are not supported by facts. All that can be said is that the eyes, as a rule, are stronger in dark than in light persons.

E. G.—If the cistern is regularly cleaned out the water will be perfectly good. You are greatly in error as to your idea of the skin absorbing water. The skin has no such function, and no water can or does pass through the pores, which are only apertures of exit for the perspiration. Cistern water should be just as good as water from the main if you clean your cistern regularly. All depends on the original character of the water.

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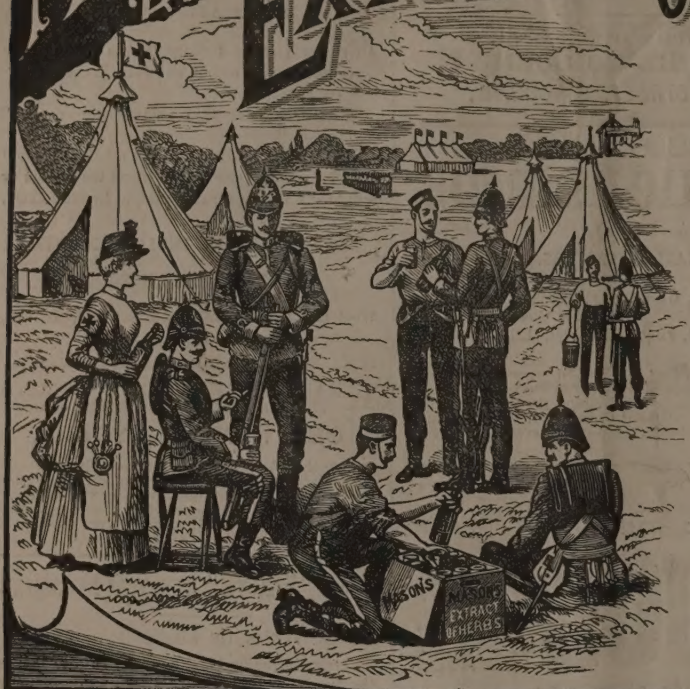

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